

**INCH-POUND**  
**MIL-C-5/1G**  
**15 December 2003**  
**SUPERSEDING**  
**MIL-C-5/1F**  
**12 August 1966**

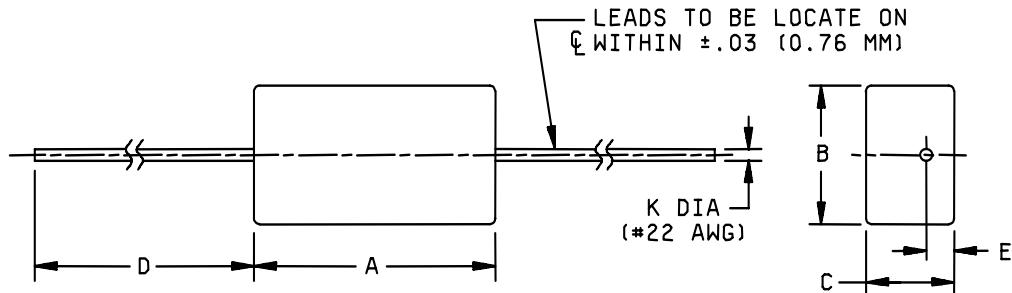
**MILITARY SPECIFICATION SHEET**

**CAPACITORS, FIXED, MICA DIELECTRIC,  
STYLE CM15**

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein  
shall consist of this specification and MIL-C-5.

**INACTIVE FOR NEW DESIGN**  
after 31 March 1999



DIM	Inches			mm		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.48	.52	.55	12.19	13.21	13.97
B	.27	.30	.31	6.86	7.62	7.87
C	.14	.19	.22	3.56	4.83	5.59
D	1.12	---	---	28.45	---	---
E	.06	---	---	1.52	---	---
K	.023	.025	.027	.58	.64	.69

**NOTES:**

- Dimensions are in inches.
- Metric equivalents are given for general information only.
- Approximate weight .05 ounce.
- Unless otherwise specified, tolerance is ±.02.

## REQUIREMENTS:

Dimensions: See figure.

Capacitance value: See table I.

Capacitance tolerance: See table I.

Symbol	Capacitance tolerance
D	$\pm 0.5 \text{ pF}$
F	$\pm 1 \text{ percent}$
G	$\pm 2 \text{ percent}$
J	$\pm 5 \text{ percent}$

DC rated voltage: See table I.

Operating temperature range: See table I.

Symbol	Temperature range
N	-55°C to +85°C
O	-55°C to +125°C
P	-55°C to +150°C

Vibration grade: 3 (10 to 2,000 Hz).

Characteristic: See table I.

Symbol	Temperature coefficient P/M/°C	Capacitance drift
C	-200 to + 200	$\pm (0.5 \text{ percent} + 0.1 \text{ PF})$
E	-20 to + 100	$\pm (0.1 \text{ percent} + 0.1 \text{ PF})$
F	0 to + 70	$\pm (0.05 \text{ percent} + 0.1 \text{ PF})$

Barometric pressure (qualification only): As specified in MIL-C-5 with condition D (100,000 ft) and 150 percent of rated dc voltage.

Immersion: As specified in MIL-C-5 except, capacitance change shall not exceed  $\pm 2$  percent of nominal value or 1 pf, whichever is greater.

Moisture resistance: As specified in MIL-C-5 except, capacitance change shall not exceed  $\pm 2$  percent of nominal value or 1 pf, whichever is greater.

Qualification inspection: Qualification inspection (Group A) is required. A manufacturer that is currently listed on the QPL for at least one other MIL-C-5 style may become qualified to the CM15 style by contacting the qualifying activity listed in the basic specification.

TABLE I. Style CM15.

Type Designation 1/	Capacitance (pf)	DC working voltage (volts)	Operating temperature range	Characteristics available for capacitance tolerances			
				±.5 pf (D)	±1% (F)	±2% (G)	± 5% (J)
CM15CD010D-3	1	500	N,O,P	C			
CM15CD020D-3	2	500	N,O,P	C			
CM15CD030D-3	3	500	N,O,P	C			
CM15CD050D-3	5	500	N,O,P	C			
CM15CD100J-3	10	500	N,O,P				C
CM15CD110J-3	11	500	N,O,P				C
CM15CD120J-3	12	500	N,O,P				C
CM15CD130J-3	13	500	N,O,P				C
CM15CD150J-3	15	500	N,O,P				C
CM15CD160J-3	16	500	N,O,P				C
CM15CD180J-3	18	500	N,O,P				C
CM15CD200J-3	20	500	N,O,P				C
CM15CD220J-3	22	500	N,O,P				C
CM15CD240J-3	24	500	N,O,P				C
CM15-D270-3	27	500	N,O,P		C, E	C, E	
CM15-D300-3	30	500	N,O,P		C, E	C, E	
CM15-D330-3	33	500	N,O,P		C, E	C, E	
CM15-D360-3	36	500	N,O,P		C, E	C, E	
CM15-D390-3	39	500	N,O,P		C, E	C, E	
CM15-D430-3	43	500	N,O,P		C, E	C, E	
CM15-D470-3	47	500	N,O,P		C, E	C, E	
CM15-D510-3	51	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D560-3	56	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D620-3	62	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D680-3	68	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D750-3	75	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D820-3	82	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D910-3	91	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D101-3	100	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D111-3	110	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D121-3	120	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D131-3	130	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D151-3	150	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D161-3	160	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D181-3	180	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D201-3	200	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D221-3	220	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D241-3	240	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D271-3	270	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D301-3	300	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D331-3	330	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D361-3	360	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D391-3	390	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D431-3	430	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D471-3	470	500	N,O,P		C, E, F	C, E, F	C, E, F
CM15-D511-3	510	500	N,O,P		C, E, F	C, E, F	C, E, F

1/ Complete type designation, where applicable, will include additional symbols to indicate characteristic (C, E, or F), capacitance tolerance (D, F, G, or J), and temperature range (N, O, or P).

MIL-C-5/1G

Supersession data: Capacitors as described herein with capacitance values ranging from 51 through 510 pf, may be considered as suitable replacements for comparable items formerly covered by MIL-C-5/3C. Recommended replacements are as follows:

MIL-C-5/3C items	Recommended replacement items
CM25E510GN3 thru CM25E511GN3	CM15ED510GN3 thru CM15ED511GN3
CM25E510GO3 thru CM25E511GO3	CM15ED510GO3 thru CM15ED511GO3
CM25E510GP3 thru CM25E511GP3	CM15ED510GP3 thru CM15ED511GP3
CM25E510JN3 thru CM25E511JN3	CM15ED510JN3 thru CM15ED511JN3
CM25E510JO3 thru CM25E511JO3	CM15ED510JO3 thru CM15ED511JO3
CM25E510JP3 thru CM25E511JP3	CM15ED510JP3 thru CM15ED511JP3
CM25F910GN3 thru CM25F511GN3	CM15FD910GN3 thru CM15FD511GN3
CM25F910GO3 thru CM25F511GO3	CM15FD910GO3 thru CM15FD511GO3
CM25F910GP3 thru CM25F511GP3	CM15FD910GP3 thru CM15FD511GP3
CM25F910JN3 thru CM25F511JN3	CM15FD910JN3 thru CM15FD511JN3
CM25F910JO3 thru CM25F511JO3	CM15FD910JO3 thru CM15FD511JO3
CM25F910JP3 thru CM25F511JP3	CM15FD910JP3 thru CM15FD511JP3

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5910-2233)

Review activities:

Army - MI  
Air Force - 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).